

ABSTRACT OF THE DISCLOSURE

It is an object of the present invention to provide a touch mode capacitive pressure sensor having higher pressure durability than conventional sensors. In this invention, a touch mode capacitive pressure sensor has a diaphragm made from boron-doped silicon, and the boron concentration at the top face of the diaphragm is equal to or greater than $1 \times 10^{19} \text{ cm}^{-3}$ and less than $9 \times 10^{19} \text{ cm}^{-3}$. Further, in this invention, a touch mode capacitive pressure sensor has a conductive diaphragm made by doping of an impurity and anisotropic etching, and the etch pit density on the top face of the diaphragm is equal to or less than five per μm^2 , and preferably equal to or less than one per μm^2 . As a result, the pressure durability of the diaphragm is greatly improved.